BRIEFER ARTICLES.

A NEW COLLETOTRICHUM DISEASE OF THE PANSY.

(WITH FIGURES)

DURING the past season a leaf-spot disease affecting the cultivated pansy has been observed in several localities in Massachusetts, which has been found to be caused by a hitherto undescribed fungus. In at least one instance the disease has shown itself to be a very destructive one, and a consideration of its economic importance will be found in the annual report of the Hatch Experiment Station of the Massachusetts Agricultural College for 1898. Professor B. D. Halsted informs me that the same thing has been found in several places in New Jersey, though not abundantly, and has very kindly sent me specimens for comparison. It is the purpose of this note to describe this form, which seems likely to become abundant in this section at least.

The disease is characterized by the appearance upon affected leaves of dead spots, at first small with a distinct black margin, but soon becoming larger and giving the leaf an appearance very similar to that produced by the well-known violet leaf-spot (*Cercospora Violæ* Sacc.). The petals also become affected, dying in spots and on the edges. Many of them do not develop fully, and thus the blossom appears malformed and unsightly. Such flowers produce no seed and in a large field of pansies raised for seed, where the disease has been seen at its worst, a considerable loss was experienced on this account. Besides this, moreover, many plants were killed outright, making the damage still greater.

The fungus which causes this trouble is a form which evidently belongs in the genus *Colletotrichum*, though in very fully developed material forms are found which closely approach *Vermicularia*, the acervuli having a considerably developed pycnidium. The species apparently stands near the boundary line between these two genera (if one exists), but comes closer to *Colletotrichum* as generally understood. I append a description of this form, for which I propose the name

Colletotrichum Violæ-tricoloris, n. sp.— Parasitic on leaves and petals of cultivated pansy, *Viola tricolor* L., causing pale yellowish spots upon

the leaves and dead areas on the petals, together with more or less deformation of the blossoms. Spots at first orbicular and definite in outline but later becoming confluent and irregular. Acervuli numerous, 50–150 μ in diameter, often confluent; stroma usually only slightly

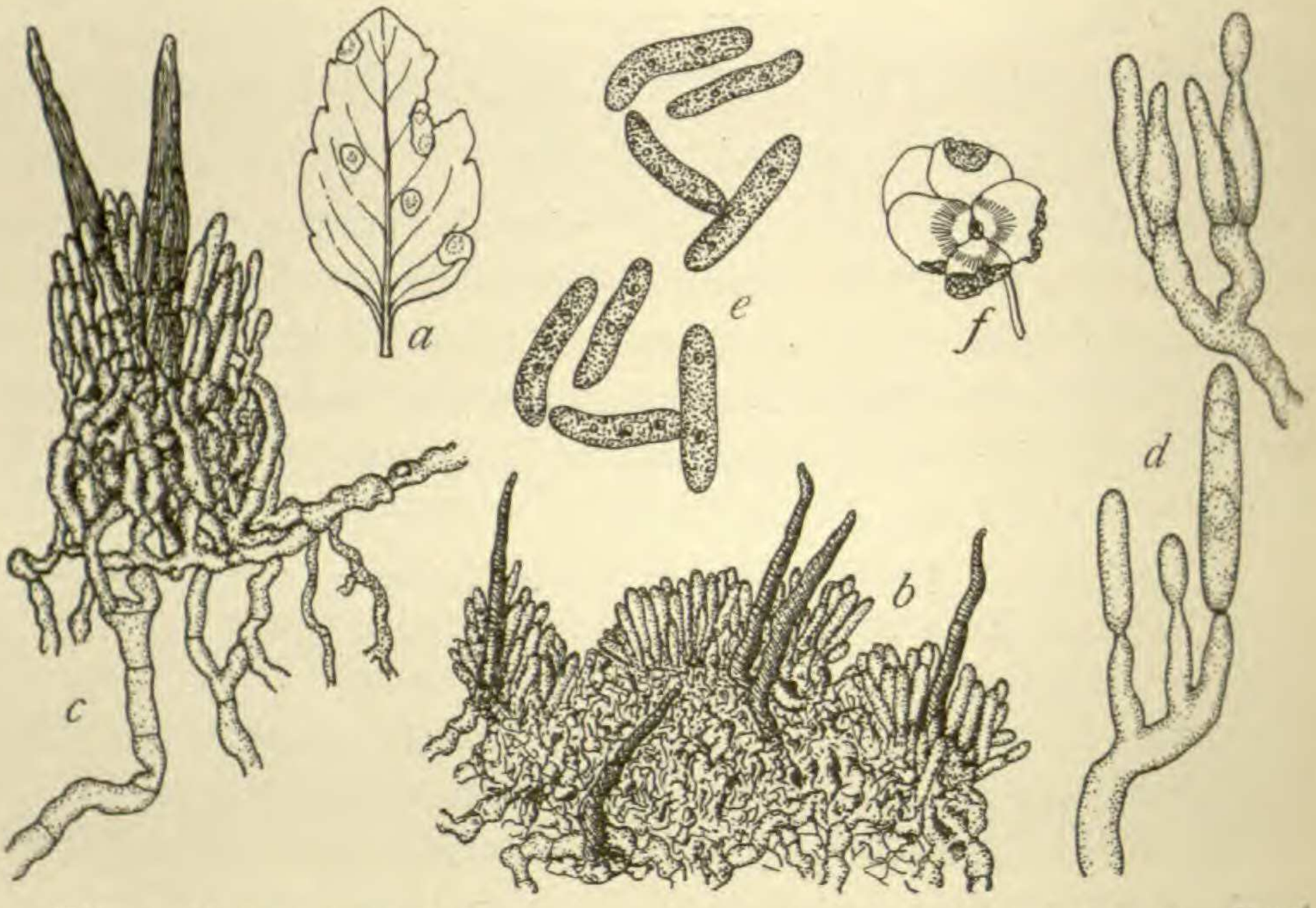

FIG. 1. COLLETOTRICHUM VIOLÆ-TRICOLORIS R. E. Smith: *a*, affected leaflet; *b*, several confluent acervuli with mycelium, setæ, and conidia; *c*, single acervulus, more enlarged; *d*, basidia and production of conidia; *e*, conidia; *f*, affected blossom.

developed but sometimes abundant and forming a sort of pycnidium, closely approaching *Vermicularia*. Setæ mostly single or in pairs, 20–70 μ long, deep brown, once or twice septate, tapering gradually to a point. Basidia short, hyaline. Conidia oblong or slightly curved, with blunt ends; hyaline, continuous, granular with vacuoles; averaging 20 × 5 μ.—RALPH E. SMITH, *Amherst, Mass.*

A NEW BIENNIAL-FRUITED OAK.

(WITH PLATES II, III)

Quercus ellipsoidalis, n. sp.—Trees 3–10^{dm} in diameter, 8–20^{m} tall, with an oblong head, the spray fine and repeatedly dividing, the limbs often descending low down on the trunk and the lowermost drooping. The bark is close, rather smooth, divided by shallow fissures into nar-